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For: Momentum Investment System, Process and Product

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**Document B:** 

Remarks

In response to the Office action dated 10/07/2003, please enter the following Remarks and the aforementioned Claims as Amended.

### THE INVENTION

The present invention is based upon the following empirical observations:

(1) Mutual fund investors chase returns, namely, the summation of dividend distributions and capital appreciation. (2) Some fund returns can be slightly predictable, i.e. past winners tend to continue to win and past losers tend to continue to lose. (3) The persistence in these funds is due almost exclusively to momentum stocks, i.e. stocks that are held, not traded in and out. (4) There appears to be less consistent skill in the mutual fund industry than one would expect. (5) Therefore, the costly professionals hired by mutual fund firms often are not warranted. See: "Cochrane, John H., New Facts in Finance".

The mutual fund systems, processes and products of the present invention involve: selecting, from a universe of asset classes, a first portfolio of a restricted number of asset classes that have demonstrated superior returns by maintaining momentum during a first period of time, say at least two years; selecting, from these asset classes, a portfolio of assets that have demonstrated superior returns by maintaining momentum during a second period of time, say at most two years; establishing and optimizing a

benchmark, based upon these portfolios, to identify a moving portfolio having a calculated momentum; and tracking and periodically updating investment decisions to monitor and maintain the calculated momentum.

More specifically, the present invention provides mutual fund systems, processes and products that are characterized essentially by a program which can be represented by pseudo-code defining the following steps: (a) selecting, from the universe of asset classes, a restricted number of asset classes that have demonstrated superior returns by maintaining momentum during an existing first period of time of relatively long duration; (b) selecting, from these asset classes, portfolios of assets that have demonstrated superior returns by maintaining momentum during an existing second period of time of relatively short duration; (c) establishing and optimizing a benchmark based upon these portfolios of assets to identify a moving portfolio having calculated momentum, and (d) tracking and periodically updating investment decisions to monitor and maintain the calculated momentum of the moving portfolio. Preferably, the first designated period of time is relatively extended, e.g. no less than two years, and the second designated period of time is relatively restricted, e.g., no more than two years. It is to be understood that each of the two periods of time extend backwardly from the same point of reference, one partially overlapping the other. In the "normal" passive indexing approach, the benchmark/index is taken as a given (i.e., the benchmark is typically exogenous to the system). In some cases, a manager determines the May 25 04 01:50p Gerald Altman 617-527-7395 p.20

benchmark/index. In the present case, indexing is not merely an outcome of endogenous forces. Rather, it is determined by exogenous forces (e.g., different portfolio managers, rating services, data availability, etc.) as well. The program herein takes one or more real snapshots of one or more real portfolios, and then establishes a benchmark accordingly.

### THE PRIOR ART

The two references cited by the Examiner typify the prior art.

As is clearly presented in Figs. 1 and 2 of O'Shaughnessy, this patent discloses a computer implemented method of allocating funds of an investor in a portfolio comprising a plurality of investments, the method comprising: determining a risk tolerance function for the investor specifying the investor's probability preference at each of the plurality of monetary amounts relative to a monetary range relevant to the investor; allocating the investment funds among the investments to create an investment allocation by maximizing an expected value- of a first probability density function of the investors probability preferences determined as a function of a second probability density function of the portfolio's predicted market performance with respect to the investment funds and the investor's risk tolerance function; and defining a plurality of risk tolerance functions; and storing each risk tolerance function with data identifying the investor associated with the risk tolerance function; displaying a plurality of risk tolerance functions; combined selected ones of the displayed risk tolerance functions to form a mean risk tolerance function; and, displaying the mean risk

tolerance function.

As is clearly presented in Figs. 1 and 2 of Rebane, this patent discloses a computer system and method for optimally allocating investment funds of an investor in a portfolio having a plurality of investments, the allocation comprising: determining a risk tolerance function for the investor specifying the investors probability preference at each of a plurality of monetary amounts relative to a monetary range relevant to the investor, and allocating the investment funds among the investments to create an investment allocation by maximizing an expected value of a first probability density function of the investors probability preferences determined as a function of a second probability density function of the portfolio's predicted market performance with respect to the investment funds and the investors risk tolerance function.

# THE REJECTION

In the Examiner's analysis of O'Shaughnessy, the Examiner relies specifically on the broadest interpretation of the following references at the following locations:

Col 11, Lines 45 to 6l: meeting certain criteria ... market leaders with highest dividend yields.

Col 12, Lines 34 to 67: stocks ... highest one year stock appreciation ... price to sales rations lower than 1.5... highest dividend yields

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Col 13, Lines 1 to 8 and 55: first set of ... stocks from a first listing ... and second set of ... stocks from a second listing ... retaining all stocks ... for a period of one year.

Col 14, Line 6, Col 14, Lines 4 to 8, Col 14, Lines 12 to 20, Col 14, Lines 30 to 34: 50 stocks are purchased ... stocks are held for a period of one year.

Table 16: ... best 1 year appreciation ....

# THE DIFFERENCES AND ARGUMENT

In comparing the claimed invention to the references, the key is manner in which different stocks are selected and retained.

In the invention claimed herein, the system and process involve asset classes that have demonstrated superior returns during a first period of time of relatively long duration, preferably no less that two years, and assets that have demonstrated superior returns during a second period of time of relatively short duration, preferably no more than two years.

In O'Shaughnessy, the system and process involve "appreciation", "dividend yields" and "retaining" stock for a "period of one year". The primary reference to time involves how long selected stock is to be retained. There is no reference in Rebane to anything that remotely suggests basing investment on a momentum benchmark that is a mathematical function of long and short periods of time that have elapsed.

Certainly, there is no suggestion in the cited prior art of the mathematical regression procedures defined in claims 5, 7, 9 and 11.

# CONCLUSION

The amendments to the claims have attempted to refine the claim language to define with great specificity the periods of long and short duration upon which the momentum function of the present invention is based. No such momentum function is contemplated in the cited references. With the above amendment, it is believed that this application is condition for allowance, which is respectfully solicited.

Respectfully submitted,

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